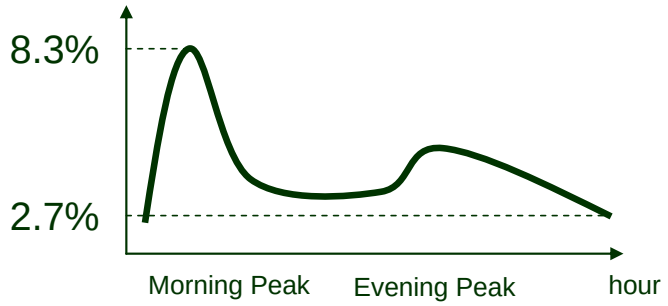
Comments on California High-Speed Rail Operation and Maintenance Assumptions
JRTT (Translated by Yu Hanakura)

Operations (these comments are summary of comments provided to CHSRA in December 2010)

- **Appendix A, Page 3**: 3.5 percent pad is too aggressive when on-time performance needs to be maintained. JR East applies 5.3 percent pad for express trains and maintains average delays within 16 seconds.
- **Appendix A, Page 5:** High-speed rail operation in 3-minute headway is very challenging. Headway needs to be adjusted based on the ridership demand forecast
- Appendix A, Page 6: Service level of southbound short-trip trains arriving Los Angeles Union Station between 6 AM and 8 AM seems too low. The assumed service level would not accommodate the regional trip demands (i.e. commuter traffic).
- **Appendix A, Page 6:** In the description regarding peak in ridership demand in Table 3, the assumed revenue-service hour consists of 6 peak hours and 10 off-peak hours (16 hours total). However, the assumed hours of service is stated as 19 hours (from 5 AM to midnight). Furthermore, trip volume demand during morning peak period would not be equal to that during evening peak period. Just for information, daily peaking factor and demand fluctuation of JR East Shinkansen service is presented in a figure below.

Figure 1 - JR East Shinkansen Daily Trip Demand Fluctuation (time-of-day)



Rolling Stock Maintenance

- **General:** Assumptions for the rolling stock maintenance are not developed in the level of detail required for the operations and maintenance planning. It is strongly recommended to develop various elements in rolling stock maintenance such as the fleet allocations (i.e. location and size of rolling stock maintenance facilities), maintenance strategy, and cleaning procedure before developing the maintenance plan or assumptions.
- **Page 3:** The rolling stock maintenance cost per trainset mile in JR Central Shinkansen operation is described as $10.23 in Table 3. While the calculation methodology is not stated, this is very conservative given that the maintenance cost in JR East Shinkansen operation is around $6 per trainset mile based on the material and labor costs.
- **Appendix A, Page 9:** The assumed cost of rolling stock overhaul seems very reasonable ($1.05 per trainset mile compared to $1.2 per trainset mile in JR East Shinkansen operation)
- **Appendix A, Page 10:** Positions for “Vehicle Maintenance” and at “Heavy Maintenance Facility” described in Table 5 (2,100 workers) seems over-staffed.